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Lessons learned from the elaboration of SEEAW tables in the Duero basin

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The tables of the System of Economic and Environmental Accounts for Water (SEEAW) focus on the quantitative assessment of the stocks and the changes in stocks which occur during the accounting period in a river basin. For that purpose, the information on the abstraction and discharge of water has to be linked with information on the water stocks in the environment, thus enabling an assessment of how current levels of abstraction and discharge affect such water stocks. This study presents the procedure followed to fill the SEEA-Water tables for asset accounts on the Spanish part of the Duero basin. The study has been carried out with support from the Duero River Basin Authority. The main stages of the applied methodology are summarized as follows: (1) Data collection – This task consisted on the compilation of the necessary datasets to achieve SEEAW requirements to fill in the tables. Much of the required data was directly measured through monitoring stations on the ground and remote sensing: weather stations, gauging stations on rivers and reservoirs, levels (or volumes) of water in artificial reservoirs, groundwater piezometric levels, among others. (2) Data estimation – Several required data are not available from direct measurements, and thus such information was estimated by modelling. Two types of models were applied: the 'SIMPA' model, related to hydrometeorological data, and the DSS 'AQUATOOL' and its module 'SIMGES', a basin management simulation software.(3) Data Implementation in SEEAW tables – After the data collection and data estimation phases, all the information was implemented into the tables. Relevant issues considered were: selected units, spatial disaggregation, period of study and considerations between Spanish and Portuguese sides to ensure the validity of the results obtained. Finally some drawbacks, conclusions and recommendations for future work are outlined.